This listing of claims will replace all versions of claims in the "**Substitute specification**" **marked version** :

**Listing of Claims:**

1. (Currently Amended) A method ~~Method~~ for ~~evaluating~~ determining defects in recorded wafer images ~~characterized by the following~~ by the steps , which comprise :
    (i) recording ~~the~~ an image of at least one reference wafer,
    (ii) determining and representing on a user interface ~~the~~ a radial distribution of ~~the~~ values measured on the at least one reference wafer as a radial homogeneity function, and
    (iii) changing a radially dependent sensitivity profile while taking into account the radial homogeneity function of the at least one reference wafer by varying at least one parameter of the sensitivity profile, ~~the~~ a learned sensitivity profile being determined visually by comparison with the radial homogeneity function.

2. (Currently Amended) The method ~~Method~~ as defined in claim 1, wherein ~~characterized in that~~ the determination of defects in said recorded wafer images is carried out on at least one ~~additional~~ other wafer by comparison between the learned sensitivity profile of the at least one reference wafer with the measured radial distribution of the homogeneity function of the at least one other wafer, a defect being determined from the comparison of the measured radial distribution of the homogeneity function with the learned sensitivity profile.

3. (Currently Amended) The method ~~Method~~ as defined in claim ~~1~~ 2, ~~characterized in that~~ wherein the defect is determined by ~~the fact that the measured~~ measuring the radial distribution of the homogeneity function ~~falls~~ falling below the learned sensitivity profile and ~~as such is marked~~ marking ~~on~~ a graphic representation of the at least one other wafer.

4. (Currently Amended) The method ~~Method~~ as defined in claim 1, ~~characterized in that~~ wherein the learned sensitivity profile depends on the distance from ~~the~~ a center point of the wafer.

5. (Currently Amended) The method ~~Method~~ as defined in claim 1, ~~characterized in that~~ wherein several different profile forms can be selected ~~by the user~~ to determine the learned sensitivity profile.

6. (Currently Amended) The method ~~Method~~ as defined in claim 5, ~~characterized in that~~ wherein three different profile forms are ~~can be~~ selected ~~by the user~~ to determine the learned sensitivity profile.

7. (Currently Amended) The method ~~Method~~ as defined in ~~one of claims 1 to~~ claim 1 6, ~~characterized in that~~ wherein a first profile form is selected independent of the radial position on the wafer.

8. (Currently Amended) The method ~~Method~~ as defined in ~~one of claims 1 to~~ claim 7 6, ~~characterized in that~~ wherein a second profile form has is selected and comprises a first and a second section, at least one of which can be varied in slope.

9. (Currently Amended) The method ~~Method~~ as defined in ~~one of claims 1 to~~ claim 8 6, ~~characterized in that there is provided~~ wherein a third profile form is provided having a first, second and third ~~section~~ sections of which at least one can be varied in slope.

10. (Currently Amended) The method as defined in ~~Method according to~~ Claim 1 ~~one of the preceding claims, characterized in that~~ wherein at least one parameter ~~can be~~ is changed so as to adapt the sensitivity profile to the radial homogeneity function of a wafer.

11. (Currently Amended) The method ~~Method~~ as defined in claim 10, ~~characterized in that at~~ wherein the least one parameter defines the radial position of a transition between two sections of the sensitivity profile differing in slope.

12. (Currently Amended) The method ~~Method~~ as defined in claim 10, ~~characterized in that~~ wherein the sensitivity profile comprises at least three levels of settings and a parameter defines the level of the sensitivity profile~~, it being possible to set at least three levels of the sensitivity profile~~.

13. (Currently Amended)  The method ~~Method~~ as defined in claim 12, ~~characterized in that~~ wherein the setting of the level can be changed by ~~use~~ means of a slider.

14. (Currently Amended)  The method ~~Method~~ as defined in claim 1, ~~one of claims 1 to 13~~, ~~characterized in that~~ wherein several learned sensitivity profiles ~~can be~~ are combined.

15. (Currently Amended)  The method ~~Method~~ as defined in claim 1 ~~one of claims 1 to 13~~, ~~characterized in that~~ wherein a learned sensitivity profile can ~~at any time~~ be replaced by a relearned sensitivity profile at any time.

Respectfully submitted,

January 10, 2006

Howard M. Ellis
Attorney of Record
Registration No. 25856
(716)626-1564

4